LOW PROFILE TENSION STYLE FLEXIBLE JOINT

ABSTRACT OF THE DISCLOSURE

A low profile tension style flexible joint for pneumatic ducting may be useful as, for example, a joint for aircraft engine pneumatic ducting. The joint of the present invention may be used at both ends of a duct that passes high temperature (up to about 1200°F) and high pressure (up to about 110 psia) compressor air to the combustor of a turbomachine. Some turbomachines, such as the turbo engine of a jet-powered aircraft, require a very short curved duct to fit into an unusually small aircraft installation envelope. Moreover, these installations also require those features found in conventional flex joints, including being able to support the axial load inherent in pressurized ducting systems. Unlike conventional flexible joints, such as ball joints, gimble joints and pressure compensated joints, the low profile tension style flexible joint of the present invention provides a low profile, low weight design with the ability to support the axial load inherent in pressurized ducting systems.